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# THE TREATMENT OF RENT IN CONSUMER PRICE INDEXES


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# THE TREATMENT OF RENT IN CONSUMER PRICE INDEXES

## I. Introduction

1. The treatment of rent in consumer price indexes is worthy of careful discussions due to:

(i) The importance of the rent component in the cost of living of the population, particularly in urban centres. It represents more than 15% of the total consumer expenditure in urban sectors in most developing countries;

(ii) The continuous housing crises prevailing in developing countries create an acute social and economic problem which obliges governments to intervene to protect tenants. Such intervention creates new problems from the point of view of price statistics, although its burden is significant to the consumer. Notably, these transactions represent an indirect increase of rent cost which should be reflected in the index.

## II. Definition

2. The revised SNA defines gross rent as follows:

All gross rent in respect of dwellings, actual and imputed in the case of owner-occupied houses including ground rents and taxes on the property. House rent will in general be space rent, covering heating and plumbing facilities, lighting fixtures, fixed stoves, wash basins and other similar equipment which is customarily installed in the house before selling or letting.. Also included are payments for garbage and sewage disposal, and expenditure of tenants on indoor repair and upkeep, such as indoor painting, wallpapering and decorating. Rent paid for rooms in boarding houses, but not in hotels, are included. Rent of secondary dwellings such as summer cottages, mountain chalets, etc. are also included.

3. From the point of view of price statistics, rent is price paid or imputed for using an unfurnished dwelling. Normally, rent may cover other related slight common expenditures such as, cost of cleaning and lighting entrance and stairs, porters wages, maintenance of lifts and the like. In some countries, rent may include the cost of other housing requirements such as water, electricity, central heating, telephone, etc. In this last case, the cost of supplement services should be easily separated for international conparison.

4. Indeed, the rent component should be well defined and standardized from the point of view of data collection to assure that any variation in rent is real fluctuation and not due to difference in specifications or component elements.

## III. Rent concept and different uses of indexes

5. Before discussing the rent problem, it may be useful to throw some light on the main uses of consumer price indexes. These purposes are as follow:

(i) In the first place, they are used for the study of the development of prices as such, which are often referred to as analytical price indices;

(ii) A second main purpose is for studies and policies concerned with movements of real income and, operationally, for the indexation of wages and other income flows. The main interest in this purpose is not in the movements of prices as such, but on the effect of these movements on the purchasing power of the income groups concerned;

(iii) Finally, consumer price indexes are needed in order to compile estimates of consumer expenditure in constant prices, particularly in the context of national accounts and balances. Such indices are usually referred to as deflator price indexes.

The need for compiling a number of variants of the consumer price index should be considered on the light of whether the difference in the results of the variants are expected to be so important that they justify separate compilation; and the practical posibilities in each country. In case of compiling only one index, the purpose of price analysis should be emphasized. Countries should endeavour to compile separate indices for items which constitute differences in scope between analytical price indices and deflator price indexes, in order to convert from the analytical price index to the deflator price index and vice versa.

6. In the analytical price indexes, the universe to be covered should reflect the price movements of goods and services entering consumption. Such a universe should therefore be defined in terms of the function to be served by the goods and services - bought for consumption - rather than in terms of the nature of goods and services; i.e., it should be related to the concept of final consumption expenditure. In this context, the interest is in prices actually paid for goods and services bought in the market for final consumption, and therefore imputed transactions are generally excluded.

7. According to the above principle associated with analytical price indexes, both rent paid and purchases of dwellings are to be included in the consumer price index. It is felt from the point of view of price analysis that dwellings are not different from other durable consumer goods.

8. However, as an exception to the general exclusion of imputed transactions, a few countries include imputed rents as well as paid rents in the index. According to national accounting concepts, purchases of dwellings constitute fixed capital formation and are therefore excluded from the consumer price index.

9. In the price deflator indexes, the universe should correspond strictly to the coverage of the aggregate to be deflated; i.e., it should cover all goods and services that are included in the consumption concept concerned, including imputed as well as actual transactions. Therefore, purchases of dwellings should be excluded, while rents actually paid or imputed are considered.

10. In the case of price indices for the measurement of real income and indexation the indices are subordinated to the income flow which is to be expressed in real terms. While the role of price indices in the deflation of income and the deflation of consumption is different, the requirements which the two indices have to meet are largely the same, and in practice the same indices are likely to be used for both purposes.

11. Indeed, it would seem that an exchange of views on the appropriate treatment of housing services in the consumer price index is desirable.

IV. Valuation of imputed rent

12. The question of reporting actual rent paid by tenants normally does not raise any problem either in household expenditure surveys or in price data collection.

In countries where housing is highly subsidized, and when in accordance with the methods adopted in Material Production System, housing service is valued at cost level rather than at rents paid; the indices should include the cost of elements and not the rents paid. In the SNA consumer expenditures cover that part paid by consumers, thus excluding the subsidized portion.

13. When a household occupies its own dwelling or a free paid one, estimated rent has to be imputed as it is considered income in kind and expenditure at the same time. The two types of rent, paid and imputed, should be taken separately in household surveys as well as price observations.

14. The valuation of imputed rent depends always upon the rent level prevailing in similar housing units, having almost the same specifications and in the same location. For example, we can use a similar flat in the same building or the same area, taking into account the advice of architects for any necessary adjustments.

15. It happens in some case, for instance in rural areas of some developing countries, that houses are usually owner-occupied and this causes problems in imputing rents thereof. In such cases, the advice of local authorities, architects, taking the same level or trend of neighbouring area's rent or index, and/or using the indirect measures of cost of construction, are commonly considered.

## V. Rent observations

16. The importance of frequent observations of rent differs from one country to another, due to differences in local conditions and regulations affecting the housing sector.

17. In almost all developed countries and some few developing countries where the relationship between owners and tenants is free from any official restrictions, the observation of rent is essential as fluctuations can easily occur. Therefore periodic rent observations are undertaken but with longer interval than for foodstuff price observations.

18. In other developing countries, the government usually intervenes in order to determine the relation between owners and tenants, more often in the interest of the latter. Once the rent level is estimated by official rent authorities, it remains stable until another decree changes it. In such cases, the rent index will always equal 100, except when new dwellings with high rents are added.

19. If the quantity of new dwellings is of minor importance compared with the existing ones, say 5% or less, it may be neglected in price statistics without great sacrifice. That means the rent index continues to be 100 provided that no new regulations are introduced to change the rents of existing dwellings. It is difficult, but not impossible, to observe the rent of such new dwellings on a sample basis and to measure its real annual volume. This is due to its dispersion in the universe, as well as the difficulty in specifying standard housing unit(s) which differs greatly according to location, number of rooms and other facilities, type of building, etc.

20. If necessary the change in the price of housing service (rent) may be indirectly measured by using the index of cost of construction (dwellings) as an indicator of the rent index for such newly built dwellings. (see paragraphs 30-34).

21. The aggregation of the two indexes, of the old buildings with index 100 and the index of cost of construction of new dwellings, each with its own weight, say 95:5 gives rise to an appropriate rent index which may still be valid until the next index of cost of construction is available (each 3 to 6 months or even yearly) according to the situation in the country and the frequency of the expected changes in construction costs.

22. In countries where rent is free from any constraints, a continuous random sample survey of dwellings or clusters of dwellings representing the universe considered by the index are regularly undertaken with an interval of 6 to 12 months between each round. The sample may be confined to a sub-sample of the same dwellings considered in a household expenditure survey. When rents are free from any restrictions we may keep the same sample for several rounds assuming that the existing dwellings sampled can easily reflect the market price movements of new dwellings.

23. At each round, we compile the current average of rent which is still applicable monthly until the next round. The base rent is derived from the household survey on which the index is based, taking into consideration the same universe represented in the index.

The indirect measures based on the variation in cost of construction may supplement or replace the system of sample surveys in case of special difficulties or lack of resources.

VI. How to measure the volume of new dwellings

24. It is difficult to estimate the volume of new buildings added each year. Such a measure will be a rough estimation taking into consideration all useful available information.

25. In countries and in areas where an official licence is a necessity in order to build, we can census the number of housing units added through the governmental offices responsible for the licensing of such structures within the universe covered by the index. Such an estimated number, has to be adjusted to take into consideration the fact that building licences can last more than one year, or can be delayed or even cancelled. At the same time, some people can build illegaly without asking for licences.

26. Another method of measuring depends upon the administrative records of taxes on buildings in countries where owners of dwellings are supposed to pay an annual specified construction tax on a housing unit. In such cases owners are obliged by law to declare by the beginning of each year the new buildings they possess. The number of annual new units with location and specifications can be easily obtained through such records if complete co-ordination between statistics and taxation departments is assured in a way to keep the records in a status to fit such a purpose.

27. Where the public sector in a country plays an effective role in housing, the number of units included in the country plan and/or in the state budget can aid in the rough estimation of the annual volume of new dwellings, supplemented by other indicators. The private sector's share is of minor importance and can be estimated as a portion of the public sector's contribution.

28. Indeed, several methods can be adopted, and the choice depends on the extent to which the information is available and reliable. Different concepts can be used when searching for more accuracy.

29. If the new dwellings each year can be roughly imputed as mentioned above, the total number of housing units can be derived from a recent housing census. If not, we can roughly consider the number of households in the universe equaling the number of housing units which may exist. Appropriate adjustments may be necessary to deal with cases where a household occupies more than one housing unit, or where more than one household occupies one housing unit. The problem of empty units is rarely found as most countries have a housing shortage. In all cases, the definition of housing unit in censuses must match with that used for civil engineering purposes.

## VII. Construction industry indexes

30. The main difficulty in compiling indexes for the construction industry lies in the fact that construction products as a general rule are unique, with a relatively long production process and consequently the proportion of work in progress is high at the end of each accounting period.

31. Three types of methods are used by different countries to prepare the construction industry indexes:

(i) those based on output;

(ii) those based on inputs;

(iii) those based on components.

32. In output type indexes the hedonic approach is a more promising development. This method involves the relation to a standard building or buildings whose quality characteristics are described in great detail. In each consecutive period, an estimate is made of the cost or price of the same type of building using the current wages, material costs, etc., but using the same technology of the base period. This approach suffers from the low representativeness and the assumption of unchanging technology.

33. In imput type indexes, the most common practice is to compile total input indexes covering wages, materials and capital consumption. Some efforts have to be directed to reducing the effects of productivity changes.

34. Measurements based on the components of production occupy an intermediate position between output type and input type. The componert method is less subject to inadequate coverage and to changes in quality than in the output type and is less affected by distortion due to changes in productivity.

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# Collection of Prices in Service Activities- transport, rent & other activities

## Egypt's Experience

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## I. Introduction

Planning in Egypt started in fact 3 years before the initiation of the 1st five years plan of 1959/60. In 1956 the general framework of planning was drawn. It required amongst other things a basic survey of the country's human and natural resources, the assessment of national income, its sources, essential requirements of consumption, patterns of consumers expenditures on goods and services at the different social levels .... etc. It is noteworthy to mention that population ccensus was already a successful practice since 1897 and was carried out every 10 years, providing a comprehensive frame work of buildings. This frame work was the basis of outlining many sample surveys.

One of these surveys that has relevant direct relation with the topic of this paper is the family budget sample survey. Besides, this paper is intended to detect briefly the actual procedures followed by the ministry of planning in collecting prices of rent and transport of passengers and commodities in the existing sectors of the economy, the public, the cooperative and the private sectors.

## II. Definitions

From the point of view of price statistics in service activities, the following definitions may be considered:-

Transport prices: The actual paid cost for:-

| Activity | Passenger transportation | Goods transportation |
|---|---|---|
| Railways | Passengers' Kilometer | Ton/Kilometer |
| Roads | " " | " " |
| Rivers | " "" | " " |
| Pipe lines | | " " |
| Air | " " | " " |
| Sea | Passenger/sea-mile | Ton/Sea-mile |
| Suez Canal | Net tonnage of passing ships | ship |

- The passenger kilometer represents the transportation of 1 passenger for 1 kilometer.
- The ton/kilometer represents the transportation of one ton of goods for 1 kilometer.
- Valuation of prices is based on the actual cost of the service paid by the last consumer.
- Transportation through the Suez Canal is based upon the actual revenues of the service.

Rent definition: may be taken as the price actually paid or imputed for similar characteristics, for using an unfurnished dwelling.

III. The actual procedures of collecting prices in service activities at the Ministry of Planning

A. **First:** Transport

a. Passenger's transportation

This service activity is rendered by 3 main sectors: government and public, private and cooperative societies.

1. The Egyptian-Govt.-Railways * transport passengers at officially fixed fares according to distances, classes and type of service. It is usually fixed in advance to cover at least the running costs of the service.
2. Public transport in big cities including busses trames, electrified means of transport .... etc. All these means of transportation are run also according to pre-fixed fares by the government.
   - Both the railways and the public transportation in cities are subsidized by the government.
3. Public transport between governorates are also subject to government pre-fixed fares.
4. Private transport whether in cities or between cities is subject to pre-fixed official fares yet, in real practice **taxi**-fares whether with counters or without, usually charge about 25% over and aobve the officially fixed rates in cities and about 50-70% over and above the officially fixed rates between cities. This is due to the fact that officially fixed rates for both public and private transport means are subject to relative comparability which results in approximated fares. While public transport is subsidized by the government, private transport is not.
5. River transport is subject to officially prefixed fares, though in fact passengers transport by private boats and tourist ships are subject to bargaining.
6. Sea and air transports - are of course subject to international fares, rates and bilateral agreements.

b. Goods transportation

1. The Eg.-Govt. Railways are subject to pre-fixed official rates for different goods and tonnages.
2. Road transport whether by private or cooperative means are subject to bargaining according to supply and demand forces. This goes for transport means both in cities or between cities.
3. River and sea transport: are subject to contract agreements according to supply and demand mechanism.
4. Air transport is subject to international freight rates.

B. Second: rents

Before 1952 revolution, all gross rents in respect with dwellings, actual and imputed - in the case of owner occupied buildings - were valuated at the rent level prevailing in similar housing units, having almost the same specifications and similar location characteristics, according to supply and demand mechanism of the available buildings. In rural areas, buildings, mainly dwellings of different types were usually owner-occupied. Thus, indirect measures, as the imputed cost of construction, were commonly used for imputing their rental values. After the revolution successive laws were issued aiming at the devaluation of the rental values based upon the prevailing actual paid-rents.

- The 1st of the these laws was law No. 199 issued in September 1952 devaluating rents of all buildings that has been constructed since January 1944 by a ratio of 15% and starting validity by due rents of October 1952.
- The 2nd, was law No. 55, issued in June 1958 devaluating rents of buildings that has been constructed since September 1952 by a ratio of 20% starting to be valid by rents due for July 1958.
- The 3rd, was law 168 issued in November 1961 devaluating rents of buildings that has been built since June 1958 by a ratio of 20% of the prevailing value and to start its validity by rents due for December 1961.
- The 4th, was law 46 issued in January 1962 setting the rules of fixing the total rental value of buildings to be as follows:-

a. A net revenue as an "investment rate" of 5% of the total value of land at the time of its construction.

plus+b. A depreciation rate of 3 of the net value of buildings covering allowances of capital depreciation plus repairs, maintainance and administration charges.

plus +c. All real estate taxes

- The 5th was law 7 issued in February 1965, devaluating the then prevailing rents subject to laws: 199 of 1952, 55 of 1958, 168 of 1961 - by a ratio of 20% starting to be valid by the due rent of March 1965. Besides, the devaluation of rents subject to law No. 46 of 1962 according to the following rules:-

a. A 35% devaluation of rents that has not been yet finally valuated, starting its validity since the date of the rental contract.

b. The least value of either:

1. Final valuation of rents that has been already valuated.
2. The devaluation of the prevailing rents by a ratio of 35%.

The validity of this law started by rents due for March 1965.

- In 1969 another law was issued changing the rates of law 46 of 1962 to a new basis of valuation, as follows:-

7% as the rate of investment of the total value of buildings.

plus + 3% as the rate of investment of the total value of land.

- In 1978 a new law altered these rates for valuating the rental value to be on the basis of:-

10% of the total value of buildings.

plus + 5% as the total value of lands.

This last law is still valid up till this was written.

## IV. Some special surveys for collecting prices of services

### A. The "Family budget surveys"

These surveys were intended to collect statistical data about the consumption expenditure, including, rents, and transportation costs, among other services' costs beside the material consumption items.

It was started by a pilot study in 1955. Then the 1st family budget survey was carried out through one whole year of monthly data-collection covering the year 1958/9. The second survey covered the year 1964/5 and the 3rd and last survey covered the year 1974/5. The targets of the last survey may be summed up in the following:-

1. To study the different consumption levels in order to set a basis for estimating the national consumption expenditure.
2. To provide weights for the construction of the consumer's index number.
3. To calculate commodity - elasticities that may be used in future projection of consumption.
4. To study the relations between household demographic features and the structure of consumption expenditure.

The procedure:

1. The survey covered 12 000 households including a portion of 2:1 as between urban and rural locations. The sample was divided into 4 sub-samples each containing 3 000 households and to be surveyed once every 3 months rotatively through the whole year.
2. Expenditure items were classified into 2 groups:-

### B. Data to be collected for the last 3 months of the survey about:-

1. Foodstuffs
2. Clothing
3. Feul
4. Cleansing materials
5. Household services
6. Personal cleaning materials
7. Tobacco
8. Consumption expenditures other than included in the tables.

b. Data to be collected for the whole year

1. Rents and similar expenses
2. Furniture and durables
3. Health services
4. Transportation and communication expenses
5. Education costs
6. Recreation costs
7. Personals materials
8. Others.

B. The Survey of Buildings & Dwellings

The Central Statistical Committee initiated in June 1960, a sample survey of metropolitan areas and urban districts with a view to obtaining a clear picture of housing conditions in these centres. The survey has so far been completed in five metropolitan cities, 61 large towns in Lower Egypt and 56 in Upper Egypt.

The survey was conducted by the interview method as well as observation. Each sampled building was visited by the investigating staff and the data were obtained as far as possible from the landlords to be recorded in the Building Schedule.

Again the investigators visited dwellings in the sampled buildings and the data were obtained from the head of the family.

The frame for selecting the samples was the list of buildings compiled by the taxation authorities in each city and capital of governorate. These lists are brought up to data annually by actual enumeration.

A sampling fraction of 2% of the buildings in each unit was fixed and the required number of sample units was drawn at random.

All the dwelling units in each selected building were investigated.

The building schedule included information on such important characteristics as types of the building, the nature of building materials, number of dwellings of different sizes, total areas in square meters, total actually built area, age of the building, number of floors, water supply and general sanitary conditions and facilities etc. .... the total rent as well as the expenses chargeable to the landlord were recorded in the schedule with reference to April 1960.

The dwelling schedule included detailed information with regard to the dwelling as well as the tenants, the relations among individuals sharing the same dwelling, the rent in April 1960, including taxes and expenses charged to the tenant on a regular basis.

The field work was entrusted to local school teachers after being trained on the survey aspects. The municipalities architects were deputized to make a field check of the accuracy of the information collected in the schedules. The completed schedules are now being fully examined for consistency and completeness before being despatched to processing.

Data concerning investment in new building operations during the years 1954-1958, were also collected in a schedule designed for this purpose. The new buildings constructed, in each of the 23 large cities in Egypt during the said years as reported to the taxation authorities were listed. A sample of 10% of the buildings were selected at random of the investigation.

The schedule included information similar to that of the Building Schedule. In addition, the cost of construction or improvements in the building as obtained from the landlord were recorded in the schedule.

## V. Some concluding remarks

1. Prices of services other than transport and rent are collected by the different departments of the ministry of planning by, more or less, similar ways for which there is no space to discuss in this paper.

2. Popular housing carried out by the Egyptian Government is subsidized at different levels, thus it is subject to different measures of valuation, rates of which may vary from symbolic fares to even granting free -ownership of dwellings to low income groups. Anyhow all actual or imputed rents of this kind are based on officially set rates.

3. Fixing prices of different service activities is a common official practice in the Egyptian administration. In fact most of which is subject to the manipulation of supply and demand mechanism.